TIGGER Transit Investments for Greenhouse Gas and Energy Reduction

U.S. Department of Transportation
Federal Transit Administration


Courtesy of Denver RTD

Project name: Denver RTD Efficient Boilers at East Metro

Transit agency: Denver Regional Transit District (Denver RTD)

Location: Aurora, Colorado

TIGGER goal: Energy reduction

FTA region number: VIII

Award amount: $770,000

Congressional district: CO-1, CO2, CO-4, CO-6, CO-7

Funding mechanism: Recovery Act (ARRA)

High-Efficiency Boilers Enhance East Metro's Efficiency

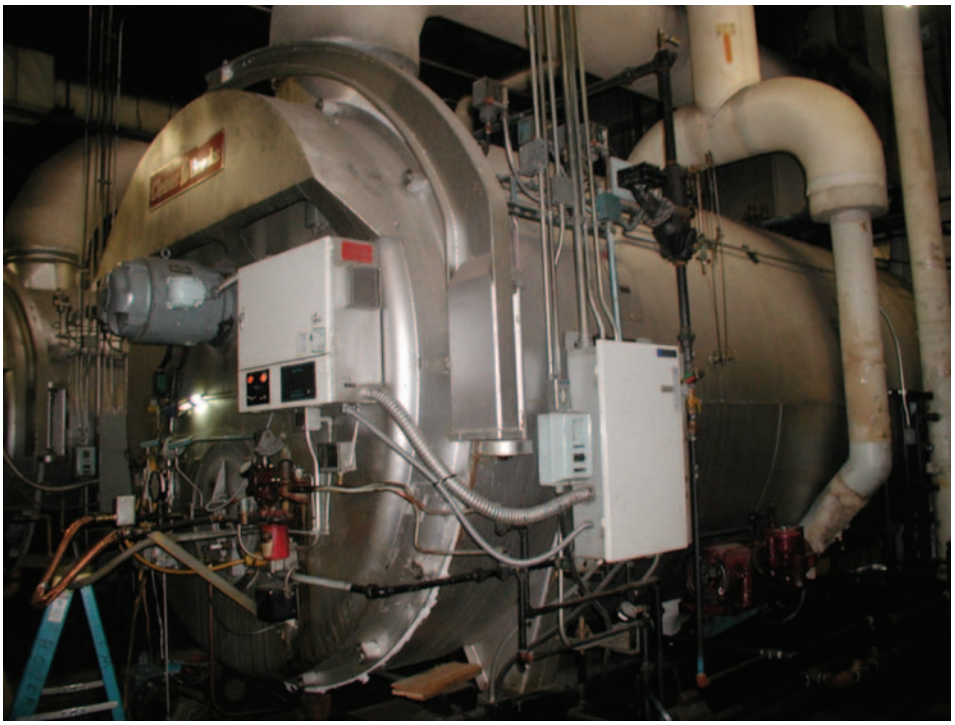
Facility Project

Denver RTD is improving energy efficiency by refurbishing the existing boiler components at its East Metro maintenance facility in Aurora, Colorado. This $770,000 project, funded by the TIGGER Program, is part of a Denver project called Energy Enhancements Yielding Operational Returns and Efficiency (EEYORE).

Upgrading the boiler components to a new energy efficient design will reduce greenhouse gas emissions and improve energy efficiency at East Metro. The existing boilers at the 351,000 square foot maintenance facility consume more than 66,000 million Btu of natural gas per year at an average operating efficiency of 82%, with NOx emissions of 60 ppm.

The upgrade includes replacing the existing boiler system components and related pipes and valves with newer, energy-efficient versions. Additionally, RTD

Denver Regional Transportation District (RTD) is a regional transit authority that has been providing transit services to eight counties throughout the Denver-Aurora-Boulder region of central Colorado for more than 40 years. Denver RTD currently operates a total of 165 fixed routes, with 1,039 fixed-route buses and 117 light rail vehicles, and employs more than 4,000 direct and contracted employees.



Courtesy of Denver RTD

Refurbished Cleaver Brooks boiler at RTD's East Metro maintenance facility in Aurora, Colorado.

Impact:

The high-efficiency boiler upgrades will reduce the annual energy consumption at East Metro by 22%, saving RTD $135,000 per year.

will install an integrated climate control system that can be programmed to turn on based on the temperature outside. With this load demand control, the boiler system may achieve up to 90% overall efficiency and reduce NOx emissions to 20 ppm.

RTD expects to save 19,341 million Btu per year with the new high-efficiency boilers. This represents a 29% reduction in natural gas consumption, and a 22% reduction in the annual energy consumption, at the East Metro facility. Based on current natural gas prices, RTD will save $135,000 per year over the 25-year lifetime of the boilers.

For More Information

Denver RTD:
www.rtd-denver.com

About TIGGER

The Transit Investment for Greenhouse Gas and Energy Reduction (TIGGER) Program *was established in 2009 by the U.S. Department of Transportation's Federal Transit Administration (FTA). Designed to reduce energy use and greenhouse gas emissions in transit agencies around the country, the TIGGER Program made funds available for capital investments that would reduce greenhouse gas emissions or lower the energy use of public transportation systems. An initial $100 million in American Recovery and Reinvestment Act grants funded 43 competitively-selected transit projects. In 2010, the FTA provided an additional $75 million in grants to fund 27 new TIGGER projects. These 70 projects are employing a variety of technologies to meet the program goals, including solar installations, building efficiency improvements, wind technology, wayside energy storage for rail, and purchase of more efficient buses. In fiscal year 2011, FTA provided an additional $49.9 million to continue the program.*

TIGGER
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FTA TIGGER:
www.fta.dot.gov/TIGGER

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